

Application No. 10/508,925
Attorney Docket No. 2002B038A

SUPPORT FOR THE AMENDMENTS

Claim 1 and 10 are amended to delete an optional limitation, the optional limitation now the subject of Claims 2 and 11, respectively.

Claims 9 and 18 have been amended to delete reference to trademarks.

Claims 12 and 13 are amended in order to provide antecedent basis, as believed necessitated by the other amendments.

It is believed there is no possibility of new matter.

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REMARKS

Claims 1-20 are in the case.

Applicants would first like to express appreciation to the Examiner for the indication of allowability of Claims 3, 4, 12, and 13 if rewritten in independent form.

Claims 9 and 18 have been rejected under 35 USC §112 for indefiniteness. Applicants have amended these claims, as noted in the **Listing of Claims**, in order to delete reference to trademarks and advance prosecution.

Accordingly, it is respectfully requested that the rejections under 35 USC §112, second paragraph, be withdrawn.

The present invention is directed to a process which, among other improvements, avoids the corrosive effects of formic acid in the Cobalt Flash Process by switching to the less corrosive acetic acid and decreases the unsound waste of process acid (acetic acid) by an efficient recycle scheme. These objects, along with several others, are set forth beginning at paragraph [0024] of the Specification.

These objects are achieved by separating condensate or distillate generated in the evaporator step into an acetic acid rich stream and an acetic acid depleted stream. This is an explicit limitation of principal Claims 1 and 10.

Beadle et al. (U.S. 5,410,090) teaches a reaction process comprising the Cobalt Flash Process and suggests acetic acid may be used. However, Beadle et al. does not fairly suggest the limitation of separating *condensate* (or *overhead*) generated in the evaporator step into an acetic acid rich stream and an acetic acid depleted stream.

Applicants refer the Examiner to column 4, line 26+, of Beadle et al., wherein it is stated:

The evaporator concentrates the cobaltous salt and generates an overhead stream of cobalt-free water and organic acid which are recycled as wash water and for

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use in the demetalling step. The concentrated cobaltous salt stream is mixed with an alcohol stream and fed to a preforming reactor where the cobaltous salt is converted to cobalt carbonyls and then fed to the stripper reactor where the cobalt is stripped overhead using synthesis gas and then absorbed in the feed olefin. The alcohol stream is preferably taken from the bottoms stream of the stripper reactor and recycled back to the preformer reactor.

The "overhead stream" (in the above quoted paragraph) is the "condensate" (or distillate) of the present claims. Beadle et al. separates into an overhead and bottoms product in the evaporator, but it does not teach subsequently splitting the overhead. In contrast, in the present claims, the *condensate or distillate* from the evaporator is separated into an acetic acid rich stream and an acetic acid poor stream downstream of the evaporator. Beadle et al. simply does not do this - the reference is *silent* on this improvement, which is a claimed feature of the present invention.

Finally, we believe it is worth noting that in the International Preliminary Examination Report (a copy of the IPER was provided in the present application concurrently with the filing of the Preliminary Amendment), it is stated that: "[t]he present hydroformylation process differs from the one of D1 [Beadle et al.] in that the aqueous acid distillate from an evaporator is separated into a concentrated acetic acid stream and a depleted acetic acid aqueous stream"

We agree with this statement. We trust Examiner Witherspoon will come to the same conclusion.

Accordingly, withdrawal of the rejection of Claims 1, 2, 5, 6, 10, 11, 14, and 15 under §103 over Beadle et al. is respectfully requested.

Claims 7-9 and 16-20 are rejected under §103 over the above-mentioned Beadle et al. further in view of Plank et al. (U.S. '842) and Gubisch et al. (U.S. '928).

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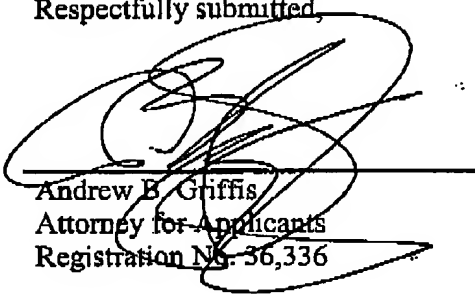
Plank et al. and Gubisch et al. are cited for the proposition that the hydroformylation catalyst may be a zeolite and/or may operate using the Octol® or Dimersol® processes. However, Applicants respectfully point out that since Beadle et al. does not fairly suggest splitting the distillate from an evaporator into acetic acid rich and acetic acid depleted streams, as mentioned above, the combination of these references cannot fairly suggest the present invention. In other words, neither Plank et al. nor Gubisch et al. cure the deficiencies of Beadle et al., discussed previously, with respect to the claims.

Accordingly, withdrawal of the rejection of Claims 7-9 and 16-20 under §103 over Beadle et al. further in view of Plank et al. (U.S. '842) and Gubisch et al. (U.S. '928) is respectfully requested.

There being no further issues, Applicants respectfully urge that the present application is in condition for allowance and early indication of such is earnestly solicited.

Respectfully submitted,

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Date


Andrew B. Griffis
Attorney for Applicants
Registration No. 36,336

ExxonMobil Chemical Co.
Law Technology
P.O. Box 2149
Baytown, Texas 77522-2149
Phone: 281-834-1886
Fax: 281-834-2495